



HELP

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HELPFILE

Problems after upgrading new Dell Inspiron to Vista

Q Earlier this year, I bought a Dell Inspiron 1501 PC. This is based on an AMD Turion 64 X2 processor with 1GB of RAM. The operating system was Windows XP Home Edition, although this machine is supposed to be Vista capable. I decided to upgrade the Inspiron to Vista to see what Vista was like. I am a Microsoft Partner and, as such, was sent Vista Business in the post. Following the upgrade to Vista, all was fine except my sound didn't work and neither did playing DVDs. Dell support in Dublin sorted out the sound driver problem, but couldn't find the necessary drivers (by ATI) for the DVD-R/RW drive.

Following two 40-minute sessions with someone at Dell support in India, I got annoyed. All they did was go through a fault-finding flowchart that indicated my DVD worked so obviously the problem must be software, and I would have to pay to talk to software support. This I refused, as I had a three-year hardware onsite warranty with Dell and, as far as I'm concerned, this is a hardware problem.

Maybe you can diagnose the problem better. The Catalyst Control Center is reported to be the wrong type for Vista, and the original support contact told me I would need an ATI Mobility Radeon Xpress 1150 driver to get the DVD to work properly.

If a PC is Vista capable, I assume it will run Windows Vista (with some new drivers). As no drivers seem to exist for the DVD drive, I'm unhappy with Dell; it wants more money from me for something that should be so simple.

Marius Stuart, marius.stuart@btopenworld.com

A It is clear you don't have a hardware problem, because your hardware was working fine until you installed Vista. Since you caused the problem by installing a copy of Vista that was not supplied by Dell, we can understand why Dell doesn't think it is responsible for supporting it. It would support Vista upgrades obtained from Dell. Microsoft supports retail and other versions supplied directly from Microsoft.

Vista drivers should be available because this is a new computer that ships with a choice of Windows XP or Vista. Your problems stem from upgrading the Dell Windows XP installation rather than starting from scratch with a clean installation of Vista.

Some of the applications and drivers used on Windows XP are not compatible with Vista. Ideally, they should have been uninstalled before you upgraded to Vista. It is always a good idea to run the Vista Upgrade Advisor before attempting to upgrade to Vista. The Upgrade Advisor is included on the Vista DVD, or can be downloaded from <http://tinyurl.com/27pekcc>. The Upgrade Advisor will usually tell you which applications need to be updated before installing Vista.

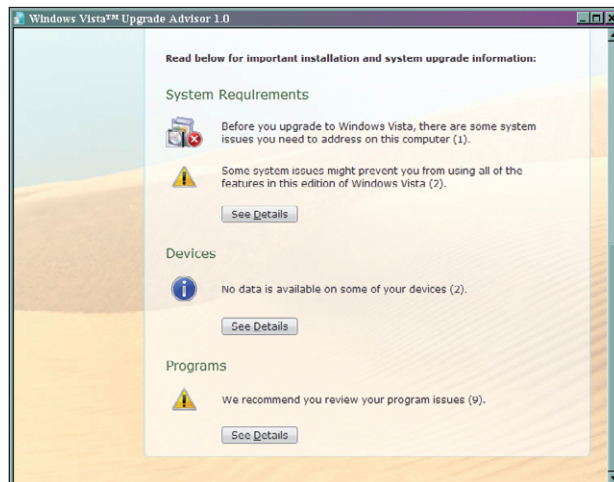
If you go to the Drivers and Downloads section at <http://support.dell.com> and select Vista as your operating system, it lists almost all the downloads you will need, including new versions of the ATI Catalyst drivers and, most importantly, an update for the Roxio CD/DVD writing software. Among the Frequently Asked Questions for your computer is a note about a lack of sound after upgrading to Vista using a Microsoft-supplied upgrade disc. The solution is to uninstall the Sigmatel HD program and then install the new Vista-compatible version.

DRIVER ISSUES

The Catalyst drivers are for the built-in graphics, not DVD. As far as we know, ATI doesn't make DVD drives so there won't be an ATI driver for a DVD drive, but your computer has an ATI chipset, including Xpress 1150 integrated graphics. Vista should have already downloaded the latest drivers but it might be worth checking Windows Update, selecting Custom and then looking for updated hardware and software.

Dell has used a variety of DVD burners with this model, including units from NEC, Philips, QSI and Samsung (also known as TSST). You must look in Device Manager to see which drive is installed in your system, as the Dell system configuration page does not state with which drive your computer was equipped. Vista supports all these DVD drives, but you may need a firmware update from the drive's manufacturer or Dell's website. Oddly, the DVD firmware updates (which aren't operating system-dependent) on the Dell website are shown if you select Windows XP as your operating system, but are not shown if you choose Vista. Choose the correct one for your DVD drive.

We believe the problem is that the Roxio (also known as Sonic) DVD/CD writing software that comes with Dell computers is not compatible with Vista and messes up DVD drives when used. The problem should go away if you uninstall all Sonic/Roxio applications and download the revised versions from Dell.



▲ Always use Vista Upgrade Advisor to check for incompatible software



Operating system damaged during shutdown

Q Last week, I shut down my desktop in the usual way but noticed that the disk light was still on, as was the fan. Having no alternative, I held the on/off button for 10 seconds and forced the shutdown. Next day, as expected, it ran ScanDisk but at the end started to delete dozens (or maybe hundreds) of corrupted files. It then proceeded to create these files again.

All this took some time, and I had to attend to other business. When I returned, the normal login screen was up so I logged on. I noticed that the taskbar was not the same; only the Zone Alarm and Real Player icons were present. The Avast! anti-virus icon was missing and when I opened it manually it refused to show in the taskbar, although it would run a scan that came up as clean.

A more in-depth review revealed that any open application would not minimise. To maximise one, I have to bring up the Task Manager and use the Bring To Front option. Windows Media Player and Explorer will not load, saying there is insufficient memory. I use Firefox mainly and this does load and work OK. Outlook Express loads, and I can receive mail, but trying to create a reply gives an insufficient memory alert and will not function.

Windows says there is no sound, but RealPlayer works fine. There's also no spool file operating, so I cannot print. The recovery disc from Mesh will not load; it says I have a later version of Windows XP. The Windows XP software is an OEM version from Mesh, so Microsoft won't help.

I've tried running various suggestions made by *Shopper* using the command prompt window, but so far nothing is working. Is there anything you can suggest? Must I buy a new version of Windows XP and, if so, what will happen to my files and settings?

Ray Scogings, resbuyer@supanet.com

A This illustrates why you should not turn off your computer while the disk light is still on. It also illustrates the need for a complete system backup, including the operating system files as well as data so that you can recover from this kind of situation.

We suspect Microsoft downloaded some automatic Windows Updates that could be installed only while the machine shuts down. When this happens, the red Turn Off icon changes to include a Windows Security shield and the shutdown screen says 'Install updates and shutdown' and warns you not to turn off the power before the updates have been applied.

It is also possible that you have a damaged hard disk or corrupted file system, which was causing problems when Windows tried to write out files during shutdown. The continuing disk access could have been its attempts to retry writing to disk. In that case, the file system damage would probably have been inevitable, anyway.

We suggest you test the hard disk using the drive manufacturer's diagnostic program. However, you should always try to back up your data before running any diagnostic on a drive that may be starting to fail. Simply running a diagnostic can cause a slowly failing drive to fail completely.

REPAIRING WINDOWS

If PC manufacturers supplied a proper Windows CD, you would be able to repair the operating system. Unfortunately, few system recovery discs include this

as an option. Most allow you only to perform a destructive restore to the condition your computer was in when it left the factory. This deletes all data and removes any installed applications. However, if the Mesh CD is checking files on the hard disk and telling you it can't proceed because you have a later version of Windows, it may well be attempting a repair install.

If your computer was supplied with an earlier release of Windows XP, you may be able to proceed by removing Service Pack 2 (SP2) and perhaps even Service Pack 1 to get back to the version it was in when it left the factory. However, it is also possible this error message is erroneous and results from the file system damage. As a last resort, you could even format your hard disk and then run the system recovery disc (after backing up your data, of course).

If the damage is to the Registry files, you could repair the damage using System Restore. If System Restore won't run, use the techniques described in last month's *Helpfile* to restore Registry files manually. However, this will not help you if files and folders used by the operating system are missing or corrupted.

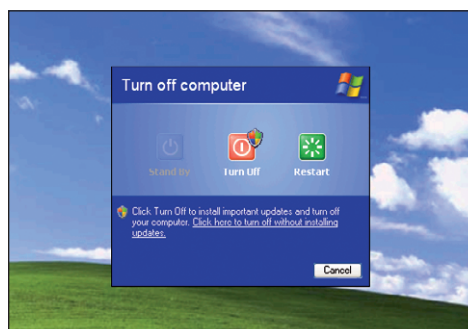
Chkdisk may have saved the recovered folders with default names, or given sub-folders their correct name but placed them in the root directory instead of the proper folder. You could go through all the recovered folders and identify where they belong (it helps to have a working Windows system to compare), then move the files back to the correct place.

If your system has SP2, you may be able to fix the damage by uninstalling and then reinstalling it. Even if you can't uninstall the service pack, you may be able to reinstall it. While SP2 does not alter every Windows file, it does change a high proportion of them.

If you can borrow a retail Windows CD, you could use it to make a 'parallel' installation of Windows XP in a different folder. You can even use a CD provided by a different computer manufacturer (many Dell PCs have been provided with proper Windows discs) as you have a valid licence. You won't be able to activate another manufacturer's version of Windows, though. When asked to activate Windows, tell it you'll do it later. You have 30 days to use the temporary version of Windows. Provided you use the same version (Home, Professional or Media Center), it is OK to install two copies of Windows on the same drive for this purpose.

After installing Windows Updates, you may then be able to copy files and folders from the working version of Windows to the damaged version, fixing it in the process. Just don't overwrite the Registry files.

Finally, you could buy a new hard disk, install Windows on this, and reconnect the original drive as a slave so you can copy data between them.



▲ Some updates require you to turn off the PC as part of the updating process

Your experts

HELPFILE

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Paul Mullen

With 27 years of PC experience as a power user, programmer and IT consultant, Paul Mullen answers all PC problems, tackling hardware, system and security issues.



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Please try to give full details of your problem. We need an email address or daytime and evening telephone numbers in case we need more information.

Although the policy of *Computer Shopper* is not to publish readers' email addresses, we include them in Help so that other readers with experience of similar problems can share their solution (please also cc any comments to the relevant Help department above). If you would prefer not to have your email address published, please say so.

Added RAM causes blue screen error

Q I recently bought a stick of 256MB DDR 2100 SDRAM from eBay. However, when I put it in the free slot of my Dell PC and booted it up, the computer displayed a blue screen. I removed the 128MB module that was there originally, and it came up with the error "Internal_Power_Error 0X0000007E".

I can boot the PC in Safe Mode, but not in normal mode. Is there a way to fix this?

Dale Parish, cnc95fan@gmail.com

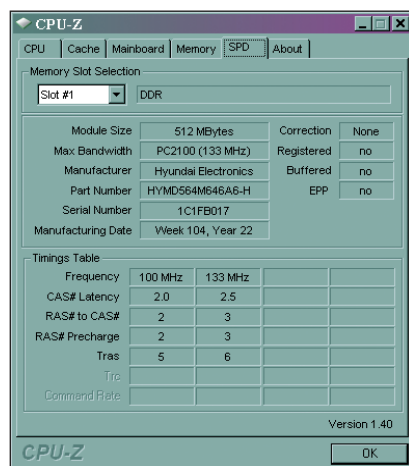
A You really shouldn't be too concerned by the exact error messages. Bad memory can cause all kinds of weird error codes. Besides which, Internal Power Error and Stop 0x7E are two separate errors.

The memory that you bought is not compatible with your Dell PC. It may be faulty or it may simply not conform to the proper specifications. Your computer can boot into Safe Mode because this is less demanding on memory than normal mode.

You may have bought a faulty memory module, although a frequent cause of these problems is the fact that cheap memory modules may use seconds, which are factory reject chips. These are then run outside the limits of their specifications.

Every memory module includes a small EEPROM chip called a Serial Presence Detect (SPD) chip. This contains information about the timings of the chips on the memory module. Unfortunately, while some motherboards allow you either to use this information or set your own memory timings, Dell computers assume that the timings on the SPD chip are correct. If the timings on the SPD chip happen to exceed the timings at which the modules can actually run, then blue screens will result.

You can see what information is on the SPD chip by running CPU-Z, a free program that can be downloaded from www.cpuid.com.



▲ CPU-Z will report the specifications of memory modules

Problems with RAID drives

Q Just over two years ago, I bought an Elite 3.6 560 PCIx computer from Mesh. After about a year, it crashed with the error message "HDD in striped array-raid 0". Mesh asked if I had saved the RAID drivers, but I hadn't because when I got the PC it had no manuals, just two pamphlet-like books on connecting the PC. I took it to a local PC shop, which repaired it but charged extra for RAID drivers.

Nine months on, it has crashed again. I returned to the shop, but was told the RAID was defunct. I asked if they could set the PC up with two drives – one as master, the other as slave – which they did. I was planning to order a Freecom external drive and True Image software, but before I could order it there was another crash. This time, Windows diverted to the Safe Mode screen but none of the options worked, so I decided to try a reinstall myself.

I used the Recovery Console, which showed up a screen offering two drives. Neither had identity letters and both were the same size, but the bottom one had NTFS so I assumed this was the master drive. Windows XP seemed to install fine, but I then discovered the C: drive was empty and the F: drive (where I kept lots of files for convenience) had become the D: drive. The files were still there, and so was Windows.

I don't understand what's happening. Windows has moved to the other drive and I have lost no data on that drive, but I did lose some data that was probably in folders belonging to the applications I was using.

Patrick Russell, pat.russell22@btinternet.com

A There are a lot of misconceptions about RAID, not least that it obviates the need for backups. Our experience with cheap RAID implementations commonly found on desktop motherboards is that they cause far more problems than they prevent.

Most of these cheap RAID controllers offer only RAID 0 and RAID 1, and not the more effective RAID 5 often used by servers. RAID 0 (or disk striping) simply combines two drives into one large virtual drive. Because alternate blocks of data are written to each drive, data access speed is faster, but if either drive fails all the data is unreadable. In addition, if the computer loses its RAID configuration information, you again have two unreadable drives, and considerable skill is needed to get RAID working again without erasing data.

RAID 1 mirrors the content of the first drive to the second, so if either drive fails you can use the other. This is the most reliable as, in theory, if the RAID array breaks, you can use either drive as a single drive. However, although RAID 1 provides a backup against a single drive failing, it does not provide a backup against more common causes of data loss, including a power surge that could damage all connected drives, file system corruption, a virus or user errors such as deleting the wrong folder.

Added to this, RAID problems can themselves lead to data loss. Even with RAID 1 you still need to back up your system and documents. It is far simpler in most cases

simply to use a single drive and then use an external drive for backups.

UNDERSTANDING IDE

Many of the problems with IDE RAID arrays are caused because these drives, unlike the Enterprise-class SCSI drives usually used in server RAID arrays, were not designed with the timing requirements of RAID in mind. There have been many IDE drive firmware bugs discovered that may cause a drive to be slow to respond, causing the RAID controller to think it has failed, and hence leading to a 'broken' RAID array.

While the drive manufacturers have produced firmware updates for these drives, they have not given these updates much publicity. Few users know it is even possible to update their drive's firmware. Check the website of your RAID's manufacturer. Although it won't directly support controllers embedded in motherboards, most of its advice still applies, and there are often notes about drives known to need firmware updates.

Make sure you also have the latest BIOS updates and drivers for the RAID controller. If the controller was on a motherboard, these need to come from the motherboard manufacturer's website. Sometimes the RAID BIOS is part of the main motherboard BIOS; sometimes it is separate.

In addition, you should always get the latest Windows drivers from the RAID manufacturer's website. Do not rely on Windows Update, which often tells you there are no later drivers available when there are. This happens because many RAID controller manufacturers, including Promise Technologies, won't pay Microsoft to get their revised drivers approved.

DIAGNOSTICS

When you stopped using RAID and set up the system with separate drives for the operating system and the data, your troubles should have been over, but your system crashed again. This makes us wonder if there is some underlying hardware problem, such as an intermittently failing drive or a bad power supply. A good uninterruptible power supply (UPS) should help; see our Labs review on page 108 for details.

Regardless of the cause of the problem, it appears that your master drive has now lost its partition information. This is commonly caused by a power glitch while writing data. Data is erroneously written over sector 0, the master partition table. Fortunately, there are several tools available that will recover damaged partition table entries and make your partitions accessible again. For example, Partition Table Doctor from www.ptdd.com is free to try, and then costs only about £20 if it finds your partitions and you want it to fix them.

You may want to try using the trial version of a disk editor such as Winhex (www.winhex.com) and simply copy sector 0 from your working drive to the non-working drive. Since both drives are the same size, chances are the partition tables are identical and this simple step may get the drive working again. You would then be able to recover application data left in application folders. Microsoft Outlook and Outlook Express are particularly bad at storing messages and contact information in hidden folders on the operating system drive.

Can I upgrade notebook graphics?

Q I recently bought a Sony High-Definition camcorder. Sadly, my Nvidia GeForce FX Go 5700 graphics card is too slow to edit the footage, as it has only 128MB of RAM. The Pinnacle Studio Plus software I am using for editing tells me I need a 256MB card.

I have an Acer Aspire 1710 notebook. Can I upgrade my card to an Nvidia GeForce 7300 or 7600 256MB card?

Loz Netto, netto@gotadsl.co.uk

A This is a frequently asked question, which we have answered before in *Helpfile*, *Shopper* 225 and 233. You can upgrade a notebook's graphics only under very limited circumstances.

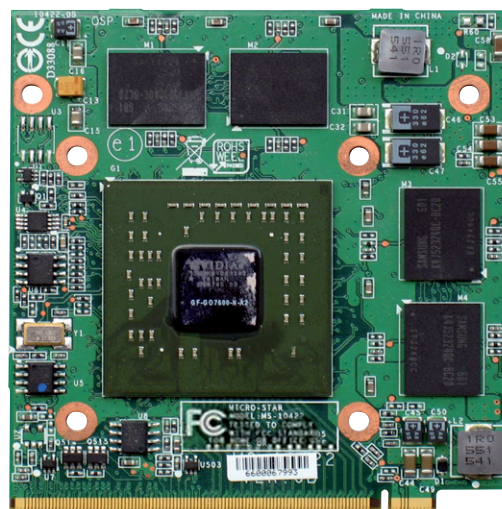
First of all, the graphics chip has to be on a separate card. Even if magazine reviews say that a notebook has a GeForce card, they probably did not take it apart to check. It may only have the GeForce chip mounted directly on the motherboard. Typically only the large desktop replacement models have separate graphics cards.

Even if it has a card, this must comply to a set of standards that Nvidia has designed, which is called MXM. ATI designed one called

Axiom, but many notebook computer manufacturers have chosen proprietary card designs. The www.mxm-upgrade.com website has a lot of information about which notebooks use MXM-compatible cards. It claims that Acer notebooks do not use MXM, so if an upgrade is available it would have to be from another Acer Aspire 1710 series machine. As far as we know, Acer has never offered an upgrade. All the 1710 series models have only a 128MB graphics card.

Dell computer users should note that all Dell graphics cards are proprietary and usually can be upgraded only in cases where Dell supplies a choice of graphics options for that model. In some cases, Dell uses several different makes of LCD on the same model and the high-end graphics cards may work only with certain makes of LCD. The www.bay-wolf.com/videoupgrade.htm webpage lists graphics options for each Dell notebook.

Finally, the computer's BIOS has to be compatible with the new card. Even where a notebook uses an MXM-compatible card, its



▲ MXM cards were designed to allow graphics upgrades, but few notebook makers support them

BIOS may be hard-coded with details of the card that was installed originally.

When you buy a notebook computer, bear in mind that, except in very limited circumstances, you are likely stuck with the graphics option with which it came.

Network folder won't reconnect at startup

Q I have a problem connecting to a shared folder on my wireless network. I have a Belkin wireless router and my main PC is running Windows XP Professional with a wireless USB adaptor. My secondary PC running is Windows XP Home and has a PCI wireless card. The router is within six feet of both PCs. The problem is that I am unable to map a drive and folder from my main PC so it reconnects when it boots. The secondary PC works perfectly.

Attempts to access files in the folder from Microsoft Office applications fail, but I have a shortcut to the shared folder on my desktop. When I click this, a connection with the folder is established and it works OK from then on. Sometimes I get the message "Drive unobtainable". The reason for this is pretty obvious. As I watch the boot process, icons start to appear in the Notification area. For whatever reason, the Belkin wireless icon appears last.

I also use an application called Synergy, which enables me to use a single keyboard and mouse for both computers. This requires the wireless connection. As it attempts to connect, it shows a screen with fault messages. These continue to appear throughout the boot process until the end, when it shows the word 'Success'.

I have removed and re-installed the USB network adaptor's software from the manufacturer's website. Despite having a 2007 date on the webpage, the file contained the same files as on my CD and installed the driver version 1.0.0.0 2/8/2005. I have set up static IP addresses for the network.

I have tried temporarily disabling firewall and anti-virus, too. I would be really grateful for any help you can give. Is it possible to get the wireless card to activate earlier in the boot process?

Brian, brian.anon@tiscali.co.uk

A If both computers are within six feet of the router, we strongly suggest buying a couple of seven-foot-long Ethernet cables and plugging them in to the router directly. Ethernet is always going to be much faster and more reliable than wireless. Synergy, an open-source application from <http://synergy2.sourceforge.net>, works over any kind of TCP/IP network. It does not need wireless.

In particular, as you have noticed, there will be a significant delay as the wireless utility scans for available wireless networks and decides which one to log on to. Both computers will be going through this process, and it is only when both are ready that you can connect to a shared resource across the network.

During Windows startup, many processes are activated in close succession and then start to load in parallel with each other. Those that take longest to load will finish last. There is very little you can do to control the timing of startup tasks, except to deliberately introduce delays in processes that need to wait for other processes to complete.

In any case, when transferring files a 100Mbit/s Ethernet connection will always be much faster than a wireless connection, which rarely manages to achieve even half its rated speed. Wireless does provide plenty of speed for internet access, where the limiting factor is

usually the speed of your broadband connection, which is rarely more than 2Mbit/s.

Using fixed IP addresses will be slightly faster than dynamic IP addresses, but the big delay will be in querying for available wireless connections and syncing up with the access point. Sometimes the wireless card manufacturer's utility is faster than the Windows XP wireless configuration. Sometimes changing router settings may help. If both your devices support 802.11g, turn off 802.11b and set the router to use 802.11g only. Wireless encryption will slow the connection down and sometimes you can use MAC address filtering instead.

The only other thing you can do is to create a batch file that pauses for a few seconds and then tries to reconnect to the network share. Check out Startup Delayer from www.snapfiles.com/get/startdelay.html. Another way to insert delays in a batch command is to use the ping command. This is particularly suitable as it will only delay as long as the network host is unavailable.

For example, if your other computer has a fixed IP address of 192.168.1.2, you could use this command:

```
PING 192.168.1.2 -n 1 -w 20000 >NUL
```

This will send one packet of data to the other computer and wait up to 20,000 milliseconds (20 seconds) for a reply. The delay will be shorter if the other computer connects earlier.

The batch command to connect and map a drive letter to a network file share is this:

```
NET USE X: \\Computer\sharename
```

Broadband/modem drops connection

Q At the recommendation of *Computer Shopper*, around a year ago I bought a Buffalo AirStation G54 High Power router, which came with a separate ADSL2+ modem. The modem is an Askey RTA1310. When it's all working, it works well, but for some reason the internet connection gets dropped periodically. This can be as often as every few minutes, or it can be every few hours, but it is always extremely frustrating.

When this happens, the DSL light on the modem usually flashes, suggesting a connection problem. However, this is unlikely, as when I connect using a USB modem this does not happen at all. I have even plugged the unit directly into the master BT socket with all other telephone wiring in the house disconnected, but this has made no difference.

The router/modem is set to auto-detect/configure, so I'm wondering if these settings need to be configured manually. So far, I've been unable to obtain any useful advice from either Askey or Buffalo. The limited information supplied with the modem says the firmware can be upgraded by HTTP, but I don't know how to do this, and in any case it may not help.

If all else fails, do you know if I can just get another Ethernet modem and plug that in

and, if so, can you recommend a particular model? I don't want to change the whole router, as this part of it seems to be fine, although if a new modem is going to cost around £30 or more then I may as well change the whole lot for a combined unit. What would you suggest?

Phil Beed, phil.milehigh@tiscali.co.uk

A There are lots of causes for frequent disconnections. It may be a faulty modem, but more usually the line conditions are poor and cleaning up the wiring can improve matters. Often the problem is with internal wiring or other equipment on the line. Connecting the ADSL modem to the master socket, with all other wiring disconnected, should isolate this.

The problem could also be caused by the telephone line between your home and the exchange. Either BT or your ISP should be able to test this. It is quite common for one modem to perform better than another on a noisy line. Sometimes upgrading firmware can improve the situation, although it does not seem that any firmware upgrades were ever made available for this model.

Askey is a well-known manufacturer of OEM modems, which are sold under a variety of brand names. These were only sold as OEM items, which means support has to come from the

► Buffalo's AirStation G54 High Power 802.11g wireless router

OEM partner. In this case, there was no brand name on the modem, but it seems Buffalo put this bundle together. They were sold only through Tesco and were soon discontinued, so you should call Buffalo support to resolve the issues.

We understand that Buffalo has identified a problem with this modem when used with certain types of exchange equipment. We don't have the details but, in cases where this applies, Buffalo has been solving the problem by sending the customer a more expensive router with a built-in modem free of charge. That seems a very generous offer, so we suggest you contact Buffalo support and see what it can do for you.

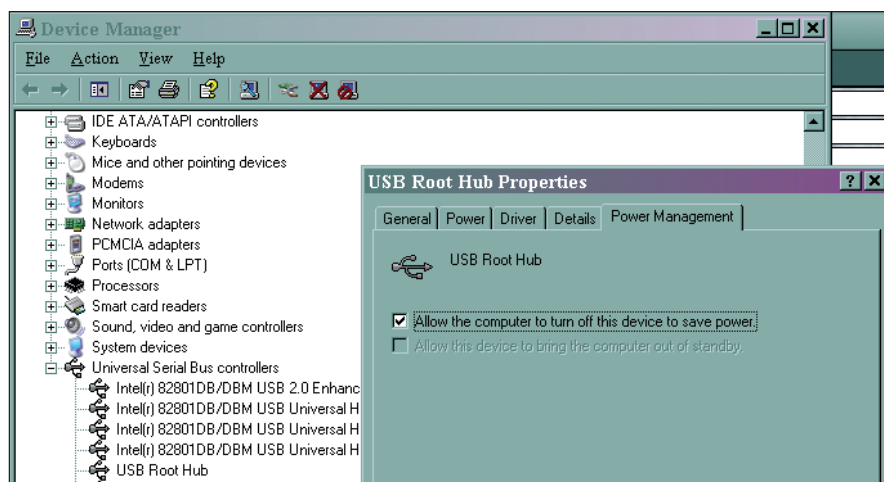


Digital camera won't connect to USB

Q I have a Packard Bell Easynote L4014 with Vista Home Premium installed. When I try and connect my Samsung V700 digital camera into any of the USB ports, an error appears saying that a USB device attached to the computer has malfunctioned, and Device Manager says that the device cannot start.

I have tried getting the latest drivers for the camera and my laptop's chipset, but the problem persists. I understand that the Acer Ferrari had a bad reputation for its weak ATI chipset, but does the Intel 915GM chipset in my laptop have any flaws with anything in its design at all, if not the USB implementation? If so, can I do anything about this?

Name not supplied, squidward.tentcales@googlemail.com



▲ If you are struggling with a USB problem, you may find that it helps to disable the Save Power option in Windows' Device Manager

A Intel chipsets generally have a good reputation for their USB support. Most USB problems are caused by other makes of chipset.

The "USB device has malfunctioned" error message is usually associated with devices drawing high power, close to the maximum limit for USB power connections. Many notebook computers may not supply sufficient power for these demanding devices. The first thing that you should try is simply to disconnect and then plug in the device again. Sometimes you will find that this works.

Another trick is first to connect a device that demands less power and then plug the camera in while the other device is connected. This works for many people, perhaps because the additional device drawing power avoids a huge surge on the USB power when the more demanding device is plugged in.

Many users find that the solution is to connect the camera through a powered USB hub. Choose a high-quality brand name hub, such as Belkin's Hi-Speed USB2 4-Port Hub. Often, you'll find that cheap USB hubs are the cause of more problems.



▲ Using a powered hub may help you

Burning smell as Windows crashes

Q I have a computer I bought from Mesh in 2001. I later upgraded it to Windows XP. A few months ago, it crashed out of Windows and there was a distinct burning smell. I unplugged it immediately and left it for a few hours. When I switched it back on, there was no burning smell, but it wouldn't reboot. I put in a new hard disk and eventually got it working again.

I put the original disk into a caddy and was pleasantly surprised to find it was entirely readable, so I was able to rescue my data. Nearly the same thing has just happened again. Windows crashed, and there was a burning smell. This time, however, it rebooted without any problems. The only apparent result was a message box telling me there had been a serious failure. Can you

diagnose this? I'm not sure if I need a *Shopper* expert or an electrician!

*Chris Stradling,
chris_stradling96@hotmail.com*

A Burning smells are not typically associated with the hard disk. In the few cases where they are, we found a chip on the circuit board had burnt out, and then the drive would definitely not work again.

Usually, burning smells come from problems in the power supply, or from an accumulation of dust-clogging cooling fans. We have, however, seen systems where a technician extended the wire to a fan and just twisted the bare ends of the wires together with no insulating tape. These bare wires later caused an intermittent short.

Another problem that can cause overheating, and hence mysterious crashes and a hot smell, is

the plastic clip on many systems that anchors the heatsink to the processor. The traditional system used metal clips that attach to the edge of the processor's socket connector, and these hardly ever broke. However, many Pentium 4 processors that use the Socket 775 socket are mounted almost flush with the motherboard, and these have a plastic cage screwed to the motherboard that holds the heatsink down. These may break, allowing the heatsink to lift slightly off the processor in one corner. The processor can then get quite hot and will often leave a burnt smell.

You should open the case, use compressed air to clean out all the dust and look for any obvious signs of an electrical short. Smell each component as the burnt smell should still be detectable. If the burning smell appears to be from the power supply then replace it, even if it seems to work.

How can I stop viruses?

Q I've become increasingly worried over the last couple of months with some of the anti-virus labs test results appearing in your magazine. Do any packages actually do what they are meant to? It seems that all the programs currently available have huge gaps in their safety capabilities.

On that note, would it be possible to run several packages simultaneously, with the packages acting as a hunting pack, so if one package were to miss something another might pick it up, or would this cause conflict of some sort?

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A We too were surprised by the results of our recent anti-virus tests (*Shopper* April 2007). We feel sorry for anti-virus developers, as their task has become far more difficult of late. It used to be that viruses were the work of amateur programmers, intent on demonstrating their skills. These viruses mostly did not intend to harm the systems they infected, as they wanted to spread without detection.

Then criminals found they could make money out of viruses. This started when a virus scanned a computer for email addresses to which it could send itself. Pretty soon, someone realised that if they sent this list of email addresses to a central computer then spammers, always eager for new email addresses to spam, would buy them.

Once the virus-writers were in league with spammers, it wasn't difficult to figure out that a virus that could send emails containing copies of itself could easily be adapted to send out spam emails instead.

So, instead of a spammer sending out spam just from his own computers, with the risk that spam complaints would get his internet connection cut off, he could rent the use of 10,000 or even 50,000 virus-infected computers from the virus-writer and send his spam through those. Such spam would be

much harder to trace back to the source, and if some computers were blocked by anti-spam filters the virus-writers could always supply lists of newly infected computers.

Today, you can assume that almost all viruses are being written for criminal purposes. Apart from sending spam, they can be used to mount attacks on websites, or to install key-logging programs designed to capture internet banking passwords. Like spyware, which also makes money out of infecting your computer, these new virus-writers are keen to make sure that more computers become infected and that infected computers stay infected.

To do that, they keep on bringing out new variants of each virus every few days, or even every few minutes, relying on the window of opportunity that is the time it takes for anti-virus companies to spot the new variants, analyse them and send out new signatures to protect against them. That means the viruses arriving in your inbox this week probably did not exist a week ago and so won't have been spotted by last week's anti-virus signatures.

For this reason, it is impossible for an anti-virus program to achieve 100 per cent detection of new viruses. If you see any email that looks at all suspicious, it would be a good idea to wait a day or two before opening it. The best anti-virus programs now check for new signatures every few minutes.

We do not recommend running two anti-virus programs. Even one can slow down a computer considerably, and with two anti-virus programs trying to provide real-time protection you can expect some severe loss of performance. We have also seen instances where the two conflict, causing neither of them to operate properly. Most problems with the operation of anti-virus software are caused by components of previously installed anti-virus software that have not been removed completely.

The set of results in our April tests labelled 'Web' show the ability of anti-spyware programs to detect Trojans, also known as spyware. They demonstrate that, although anti-virus programs



▲ McAfee SiteAdvisor can show you which sites are dangerous before you visit them

now claim to detect spyware, they are often not very good at it. You need to use one of our top-ranked anti-spyware programs in addition to your anti-virus software.

In fact, because spyware is so difficult to detect, we suggest you scan your computer with more than one anti-spyware program. There are several excellent free choices available. You must make sure that at least one of the anti-spyware programs has real-time detection enabled. Most of the free programs, with the exception of Microsoft's Windows Defender, do not include real-time protection.

To avoid slow-downs and conflicts, do not have more than one anti-virus and one anti-spyware program configured to give real-time protection. You can scan your hard disk with as many as you like, provided you run the scans at different times. F-Secure prevents you using any anti-spyware software except the one it provides (a renamed version of Lavasoft's Ad-Aware).

Above all, be careful what you download. Many problems are caused by well-meaning users searching for anti-virus or anti-spyware software and downloading 'rogue' programs that are at best ineffective and at worst install spyware or viruses on your computer. We have found the free tool at www.siteadvisor.com is very effective at flagging the search results that are dangerous sites.